



Leading to Sustain

Waukesha County Sustainability Program

Waukesha County Sustainability Plan

- Called for by County Executive Vrakas
- Developed by multi-departmental team
- Adopted by the County Board
- Set Policy Direction and Support
- Years 2008 – 2010 activities
- Included in annual budget

Public Communication and Accountability

- www.waukeshacounty.gov/sustain
- Plan objectives have performance measures (ie. % reduction)
- LEED Standards not Certification

Sustainable Initiatives

- Building Design and Operation
- Grounds and Site Management
- Land Use and Environment
- Purchasing and Employees
- Transportation





Building Design and Operation

- Implement **LEED** Standards for Waukesha County Facilities
- **Retro-commission** County Facilities
- Reduce **Electrical** Consumption
- Reduce Natural **Gas** Consumption
- Reduce **Water** Consumption



Ice Arenas



- Utilize 'waste' heat for lobbies, locker rooms, seating areas
- HVAC Upgrades
- 60% utility cost reduction



Ice Arena Lights



Before



After

Project

- Replaced 400 watt metal halide fixtures with Four-foot T8 Hi-Bay 6-lamp fixtures at Eble and Naga-Waukeee Ice Arenas
- Replaced T12 magnetic fixtures with a T8 system.
- Installed sensors in Eble lobby and LED exit signs.

Result

- Happy Customers - Lighting levels were increased from 25 foot-candles to 65 foot-candles.
- **Annual Savings** - Estimated 117,200 kilowatt hour reduction, or **\$11,500 per year**.

Grant Funding – ROI

\$44,000 Costs

(\$8,900) WE Grant

\$36,000 Net Costs

3.1 Years ROI



Construction Material Reuse and Recycling

- Construction and demolition (C&D) debris makes up about **28.7%** or 1.4 million tons of Wisconsin's solid waste.



Retzer Nature Center Construction Recycling Pilot Project



Retzer Project Results

Material	Volume (yd3)	% of Total Volume	Weight (Tons)	% of Total Weight
Cardboard	2	1.12%	2.24	1.59%
Scrap Metal	24	13.45%	4.03	2.86%
Wood	79.05	44.3%	10.03	7.12%
Concrete	60	33.63%	120	85.17%
Reuse	13.38	7.5%	4.6	3.26%
Total Recyclables	178.43	48.13%	140.9	82.17%
Total Trash	193.33	51.87%	30.58	17.83%
Total	370.76	100%	171.48	100%

Est. cost of project without recycling

\$4,955.58

Cost with recycling

\$4,039.60

Savings

\$ 915.98



The Nagawaukee Park Project recycled two metal Quonset huts

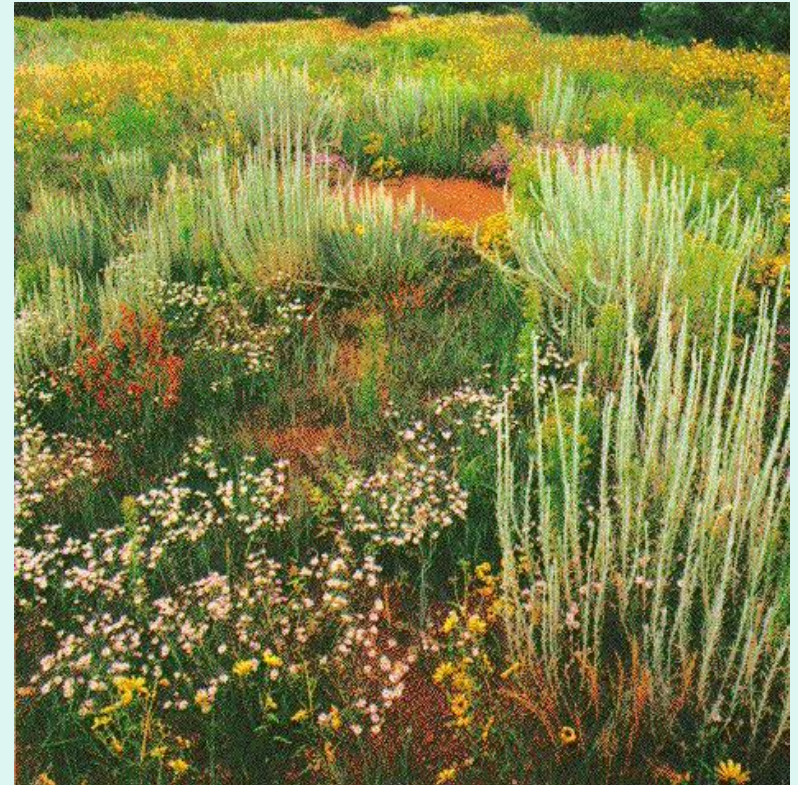


- The metal was sold to a scrap dealer.
- Concrete & asphalt were reused.
- Cardboard was recycled.
- Total of **472 tons** or **99.71%** of materials were kept from landfill.
- Savings = **\$5,484**



Grounds and Site Management

- Naturalized areas
- Reduced mowing



Parking Lot Islands



Entrances



Shelters and Multi-Use Areas



Buffer Zones Along Waterways



Reduced Mowing

1,500 gallons of fuel were saved last year at Minooka Park alone.



Roundabouts

- 90% less cost to maintain
- 20% fewer accidents
- \$3,500 per year to maintain standard intersection – 94 in County



Traffic Signal Interconnect



- Reduces vehicle delay and related emissions on high traffic corridors by 20%



Asphalt Reclamation

- 60% repaving projects using recycled techniques



Reduce Salt Usage

- Pre-wet systems
- Use of Brine
- Sand/salt mixtures
- Calcium Magnesium acetate
- Calcium chloride
- Reduce spreader settings
- ~ 17,000 tons salt per year – reducing by 20%



Alternative Fuels

- Study the potential use of alternate fuels
- Study ROI and implement if appropriate



Environmentally Preferable Purchasing

- We're picking projects with a high likelihood of success
 - Energy efficient office equipment and appliances
 - Janitorial cleaning products, supplies and equipment
 - Office furniture and supplies
 - Paper
- Establishing baselines
 - How much are we buying?
 - What are the opportunities?
 - Copy others!



Paper Reduction Effort

- Reduce paper use by **20%** compared to baseline year
- Reuse “2nd Chance” paper for in-house documents
- Educate employees to use email, duplex copy, print preview, store documents electronically
- Track and report results



What's Next

- Energy Efficiency Conservation Block Grant Implementation
- Updating Sustainability Plan 2010 - 2013
- Geothermal Installation - 2010
- Solar Hot Water – 2010
- Exterior Lighting Upgrades - 2010 – 2011
- Continued focus on sound ROI
- Continued use of multi-departmental Sustainability Team